

INTEGRATED FILTER SYSTEM FOR A DATA STORAGE DEVICE

Abstract of the Disclosure

5 An apparatus for mitigating particle and aerosol contaminants from an internal environment of a data storage device is disclosed. The apparatus includes a base, a breather diffusion path formed in the base, a re-circulating filter channel adjacent the base, and an absorption filter chamber adjacent the re-circulating filter channel and communicating with the breather diffusion path.

10 A breather filter removes particulates from air migrating through the diffusion path. The length and diameter of the diffusion path precludes transfer of humidity from the external environment of the data storage device to the internal environment of the data storage device. A re-circulating filter spans the re-circulating filter channel and removes particulates from airstreams passing through
15 the re-circulating filter channel, and a substantially carbon based absorption filter extracts corrosive gases and organic vapors from the internal environment of the data storage device.